

REMARKS

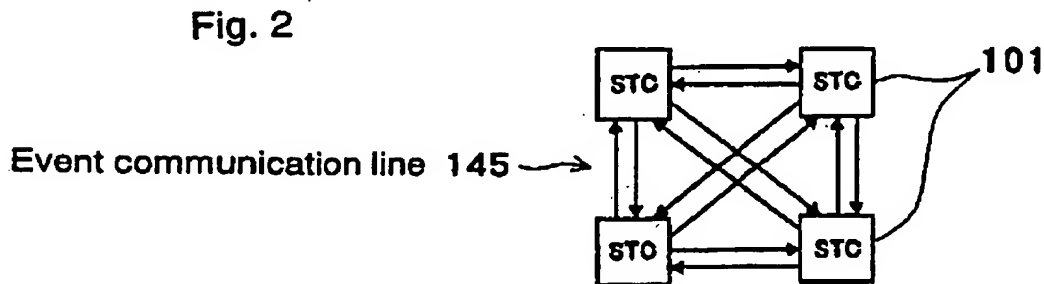
Initially, applicants would like to thank Examiner Cody for granting an interview and for his time spent during the interview.

Claims 1, 9, 15 and 21-35 are pending in the application.

Claims 1 and 21-35 were rejected as being anticipated by KATSUKI et al. 5,581,767. That rejection is respectfully traversed.

Claim 1 recites "at least four state control units that are directly interconnected to each other by respective dedicated event communication lines so that each of the at least four state control units is directly connected to all other ones of the state control units". Emphasis added.

As pointed out at the interview, even state control units STC on opposing corners in the representative embodiment of Figure 2, reproduced below, are directly connected by, for example, a dedicated diagonal event communication line 145. Such dedicated lines being between two respective STC units.



The position set forth in the Official Action is that KATSUKI discloses a direct connection with all control units being directly connected to each other.

However, as pointed out at the interview, the control units 22 of KATSUKI are not directly interconnected to each other by dedicated event communication lines as recited.

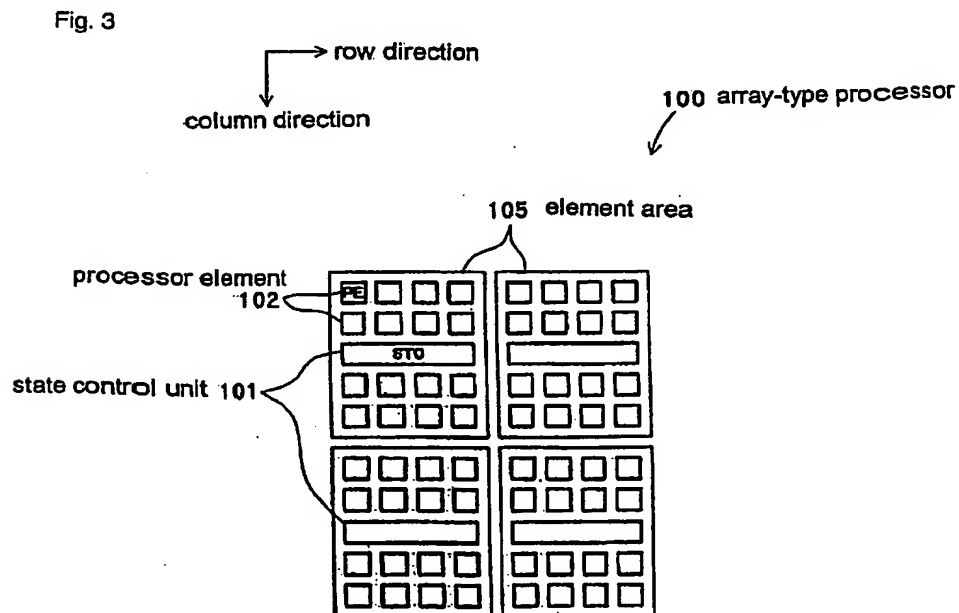
Rather, in KATSUKI, as noted at the interview, controllers 22 that are on different rows are connected by both a column bus and a row bus, so that data is first applied to a column bus line and then switched to a row line. See column 12, lines 29-33.

In this way, the same line used for communication between the bottom left hand controller 22 and the bottom right hand controller 22 is also used between the bottom left hand controller 22 and the top right hand controller 22. That is, KATSUKI does not dedicate lines only between two controllers and rather uses the same lines to connect more than two controllers. KATSUKI does not disclose control units that are directly interconnected to each other by dedicated event communication lines as recited.

As the reference does not disclose that which is recited, the anticipation rejection is not viable. Reconsideration and withdrawal of the rejection are respectfully requested.

Independent claim 21 is amended and recites that the multiplicity of processor elements is divided into a number of element areas corresponding to the number of state control units. The number of element areas being less than the multiplicity of processor elements. Claim 21 is further amended as suggested during the interview to define the element areas. The element areas are recited in claim 21 as being separate areas of the array-type processor that each have a plurality of processor elements.

By way of example, as seen in Figure 3 of the present application, reproduced below, there are sixteen processor elements 102 per element area 105 and one state control unit 101 that is connected to the processor elements of a respective element area 105.



As pointed out at the interview and as set forth on page 13 of the Official Action, KATSUKI fails to disclose that a number of element areas corresponding to the number of state control units and the number of element areas is less than the multiplicity of processor elements. Rather, KATSUKI at column 6, lines 32-35 disclose a one-to-one correspondence between processor units and control units.

As the reference does not disclose that which is recited, the anticipation rejection as to claim 21 is not viable. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 22-35 depend from claim 21 and further define the invention and are believed patentable at least or depending from an allowable independent claim.

Claim 9 was rejected as unpatentable over KATSUKI in view of common art. That rejection is respectfully traversed.

As no art is applied showing a central control unit provided for distributing event data to a plurality of state control units, wherein the central control unit is surrounded by the plurality of control units, *prima facie* obviousness has not been established.

By way of example, Figure 13 of the present application, reproduced below, shows central control unit 155 surrounded by a plurality of state control units 101.

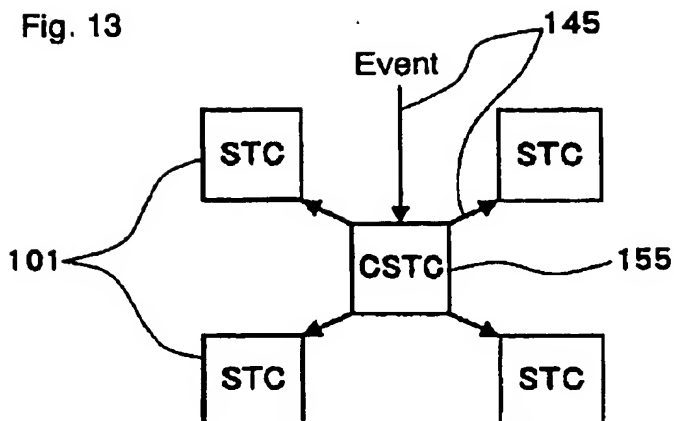


Figure 2 of KATSUKI shows a host computer 58 (noted in the Official Action as a central control unit). However, neither Figure 2 nor any other figure of KATSUKI shows computer 58 surrounded by a plurality of state control units.

As each of the recited limitations is not taught or suggested by the prior art, *prima facie* obviousness has not been established.

The Examiner is required to provide a reference that discloses the above-recited feature that is missing from KATSUKI and a motivation to combine that reference with KATSUKI in order to establish *prima facie* obviousness. As the Examiner has neither provided such a reference nor provided the motivation, the rejection of claim 9 is not viable.

Moreover, even if the Examiner were to provide a reference, claim 9 is amended to define the event data. The event

data of claim 9 distinguishes over the "code" noted on page 10 of the Official Action as meeting the limitation of the recited event data.

Claim 15 was rejected as unpatentable over KATSUKI in view of STOKES 3,537,074. That rejection is respectfully traversed.

Claim 15 recites a multiplicity of processor elements is divided into element areas so that there is a state control unit for each element area and there is one state control unit for a plurality of processor elements.

By way of example, as seen in Figure 3 of the present application, reproduced above, there are sixteen processor elements 102 per element area 105 and one state control unit 101 that is connected to the processor elements of a respective one element area 105.

The Official Action recognizes that KATSUKI does not disclose a multiplicity of processor elements is divided into element areas so that there is a state control unit for each element area and there is one state control unit for a plurality of processor elements. STOKES is offered for this disclosure with the Official Action concluding that it would have been obvious to modify KATSUKI in view of STOKES to allow for a simpler design that increases flexibility and efficiency.

However, this conclusion is untenable for at least the following reason.

As pointed out at the interview, modifying KATSUKI in the manner suggested would change the principle of operation of KATSUKI.

The Court of Customs and Patent Appeals has held that if the proposed modification would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

In the present case, KATSUKI is directed to a one-to-one correspondence between the control units 22 and the processor units 12. See the abstract, claims and column 7, lines 38-46 and column 8, lines 1-4 and the entire disclosure of KATSUKI.

Modifying KATSUKI in the manner suggested so that there is one control unit for a plurality of processor units would change the principle of operation of KATSUKI from the disclosed one-to-one control unit/processor unit set. As the proposed modification would change the principle of operation of KATSUKI, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

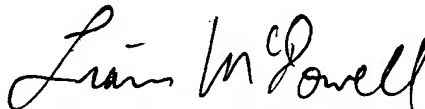
Moreover, claim 15 is amended to recite the definition of "event data" as disclosed on page 5, lines 7-11 of the application as filed. As pointed out at the interview, the recited event data distinguishes over the "code" of KATSUKI.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Liam McDowell, Reg. No. 44,231
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

LM/lk